Jan-Bernd HÃ¶vener

List of Publications by Year
in descending order

76 papers	2,359 citations	218677 26 h-index	223800 46 g-index
84 all docs	84 docs citations	84 times ranked	1471 citing authors

#	Article	IF	Citations
1	Multimodal Targeted Nanoparticle-Based Delivery System for Pancreatic Tumor Imaging in Cellular and Animal Models. Current Pharmaceutical Design, 2022, 28, 313-323.	1.9	10
2	Instrumentation for Hydrogenative Parahydrogen-Based Hyperpolarization Techniques. Analytical Chemistry, 2022, 94, 479-502.	6.5	52
3	Dynamic in vivo monitoring of fracture healing process in response to magnesium implant with multimodal imaging: pilot longitudinal study in a rat external fixation model. Biomaterials Science, 2022, 10, 1532-1543.	5.4	14
4	Influence of Spatial Resolution and Compressed SENSE Acceleration Factor on Flow Quantification with 4D Flow MRI at 3 Tesla. Tomography, 2022, 8, 457-478.	1.8	4
5	Frequencyâ€Selective Manipulations of Spins allow Effective and Robust Transfer of Spin Order from Parahydrogen to Heteronuclei in Weaklyâ€Coupled Spin Systems. ChemPhysChem, 2022, 23, .	2.1	10
6	Quasi-continuous production of highly hyperpolarized carbon-13 contrast agents every 15 seconds within an MRI system. Communications Chemistry, 2022, 5, .	4.5	15
7	Symmetry Constraints on Spin Order Transfer in Parahydrogen-Induced Polarization (PHIP). Symmetry, 2022, 14, 530.	2.2	6
8	High-Resolution Single Tooth MRI With an Inductively Coupled Intraoral Coilâ€”Can MRI Compete With CBCT?. Investigative Radiology, 2022, 57, 720-727.	6.2	11
9	Performance and reproducibility of 13C and 15N hyperpolarization using a cryogen-free DNP polarizer. Scientific Reports, 2022, 12, .	3.3	15
10	Catalytic Hydrogenation of Trivinyl Orthoacetate: Mechanisms Elucidated by Parahydrogen Induced Polarization. ChemPhysChem, 2021, 22, 370-377.	2.1	4
11	Selective excitation doubles the transfer of parahydrogen-induced polarization to heteronuclei. Physical Chemistry Chemical Physics, 2021, 23, 14146-14150.	2.8	9
12	High field parahydrogen induced polarization of succinate and phospholactate. Physical Chemistry Chemical Physics, 2021, 23, 2320-2330.	2.8	8
13	Open-source, partially 3D-printed, high-pressure (50-bar) liquid-nitrogen-cooled parahydrogen generator. Magnetic Resonance, 2021, 2, 49-62.	1.9	22
14	3Dâ€printed, patientâ€specific intracranial aneurysm models: From clinical data to flow experiments with endovascular devices. Medical Physics, 2021, 48, 1469-1484.	3.0	14
15	<scp>Pseudoâ€Enhancement</scp> in Intracranial Aneurysms on <scp>Blackâ€Blood MRI</scp>: Effects of Flow Rate, Spatial Resolution, and Additional Flow Suppression. Journal of Magnetic Resonance Imaging, 2021, 54, 888-901.	3.4	16
16	Telmisartan prevents high-fat diet-induced neurovascular impairments and reduces anxiety-like behavior. Journal of Cerebral Blood Flow and Metabolism, 2021, 41, 2356-2369.	4.3	13
17	Thinâ€Film Patientâ€Specific Flow Diverter Stents for the Treatment of Intracranial Aneurysms. Advanced Materials Technologies, 2021, 6, 2100384.	5.8	2
18	A realistic way to investigate the design, and mechanical properties of flow diverter stents. Expert Review of Medical Devices, 2021, 18, 569-579.	2.8	3

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19	Parahydrogen-Induced Polarization Relayed via Proton Exchange. Journal of the American Chemical Society, 2021, 143, 13694-13700.	13.7	18
20	Parawasserstoffâ€induzierte Polarisation von AminosÃuren. Angewandte Chemie, 2021, 133, 23688.	2.0	2
21	Parahydrogenâ€Induced Polarization of Amino Acids. Angewandte Chemie - International Edition, 2021, 60, 23496-23507.	13.8	34
22	Coherent Evolution of Signal Amplification by Reversible Exchange in Two Alternating Fields (altâ€SABRE). ChemPhysChem, 2021, 22, 2381-2386.	2.1	14
23	Luminal enhancement in intracranial aneurysms: fact or feature?â€”A quantitative multimodal flow analysis. International Journal of Computer Assisted Radiology and Surgery, 2021, 16, 1999-2008.	2.8	2
24	Selective excitation of hydrogen doubles the yield and improves the robustness of parahydrogen-induced polarization of low-Î³ nuclei. Physical Chemistry Chemical Physics, 2021, 23, 26645-26652.	2.8	15
25	Continuous Radio Amplification by Stimulated Emission of Radiation using Parahydrogen Induced Polarization (PHIPâ€RASER) at 14 Tesla. ChemPhysChem, 2020, 21, 667-672.	2.1	25
26	Pulse-Programmable Magnetic Field Sweeping of Parahydrogen-Induced Polarization by Side Arm Hydrogenation. Analytical Chemistry, 2020, 92, 1340-1345.	6.5	28
27	Intratumoral Distribution of Lactate and the Monocarboxylate Transporters 1 and 4 in Human Glioblastoma Multiforme and Their Relationships to Tumor Progression-Associated Markers. International Journal of Molecular Sciences, 2020, 21, 6254.	4.1	13
28	Dynamic 2D and 3D mapping of hyperpolarized pyruvate to lactate conversion in vivo with efficient multiâ€echo balanced steadyâ€state free precession at 3 T. NMR in Biomedicine, 2020, 33, e4291.	2.8	16
29	Coherent polarization transfer in chemically exchanging systems. Physical Chemistry Chemical Physics, 2020, 22, 8963-8972.	2.8	4
30	Ni(II)porphyrins as pH dependent light-driven coordination-induced spin-state switches (LD-CISSS) in aqueous solution. Journal of Porphyrins and Phthalocyanines, 2020, 24, 480-488.	0.8	7
31	Virtual implant planning and fully guided implant surgery using magnetic resonance imagingâ€”Proof of principle. Clinical Oral Implants Research, 2020, 31, 575-583.	4.5	29
32	In vitro singlet state and zero-quantum encoded magnetic resonance spectroscopy: Illustration with N-acetyl-aspartate. PLoS ONE, 2020, 15, e0239982.	2.5	6
33	Simulating Nonâ€linear Chemical and Physical (CAP) Dynamics of Signal Amplification By Reversible Exchange (SABRE). Chemistry - A European Journal, 2019, 25, 7580-7580.	3.3	2
34	SAMBADENA Hyperpolarization of ¹³Câ€Succinate in an MRI: Singletâ€Triplet Mixing Causes Polarization Loss. ChemistryOpen, 2019, 8, 728-736.	1.9	25
35	Zero-field nuclear magnetic resonance of chemically exchanging systems. Nature Communications, 2019, 10, 3002.	12.8	36
36	Multiple Quantum Coherences Hyperpolarized at Ultraâ€Low Fields. ChemPhysChem, 2019, 20, 2823-2829.	2.1	14

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37	Lifetime of Para hydrogen in Aqueous Solutions and Human Blood. ChemPhysChem, 2019, 20, 2408-2412.	2.1	8
38	Simulating Nonâ€linear Chemical and Physical (CAP) Dynamics of Signal Amplification By Reversible Exchange (SABRE). Chemistry - A European Journal, 2019, 25, 7659-7668.	3.3	25
39	Non-contrast-enhanced magnetic resonance imaging for visualization and quantification of endovascular aortic prosthesis, their endoleaks and aneurysm sacs at 1.5â€T. Magnetic Resonance Imaging, 2019, 60, 164-172.	1.8	16
40	¹⁵N MRI of SLICâ€SABRE Hyperpolarized ¹⁵Nâ€Labelled Pyridine and Nicotinamide. Chemistry - A European Journal, 2019, 25, 8465-8470.	3.3	33
41	Dendronised Ni(<scp>ii</scp>) porphyrins as photoswitchable contrast agents for MRI. Physical Chemistry Chemical Physics, 2019, 21, 24296-24299.	2.8	12
42	Optimization of 3D phase contrast venography for the assessment of the cranio-cervical venous system at 1.5ÂT. Neuroradiology, 2019, 61, 293-304.	2.2	8
43	Parahydrogenâ€Based Hyperpolarization for Biomedicine. Angewandte Chemie - International Edition, 2018, 57, 11140-11162.	13.8	251
44	Magnetic resonance imagingâ€”a diagnostic tool for postoperative evaluation of dental implants: a case report. Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology, 2018, 125, e103-e107.	0.4	21
45	A mild case of molybdenum cofactor deficiency defines an alternative route of MOCS1 protein maturation. Journal of Inherited Metabolic Disease, 2018, 41, 187-196.	3.6	16
46	In vivo 13C-MRI using SAMBADENA. PLoS ONE, 2018, 13, e0200141.	2.5	35
47	Simultaneous characterization of tumor cellularity and the Warburg effect with PET, MRI and hyperpolarized ¹³C-MRSI. Theranostics, 2018, 8, 4765-4780.	10.0	35
48	Only Para-Hydrogen Spectroscopy (OPSY) Revisited: In-Phase Spectra for Chemical Analysis and Imaging. Journal of Physical Chemistry A, 2018, 122, 8948-8956.	2.5	13
49	OnlyParahydrogen SpectrosopY (OPSY) pulse sequences â€“ One does not fit all. Journal of Magnetic Resonance, 2018, 297, 86-95.	2.1	8
50	Chemical Exchange Reaction Effect on Polarization Transfer Efficiency in SLIC-SABRE. Journal of Physical Chemistry A, 2018, 122, 9107-9114.	2.5	33
51	Response to the letter to the editor regarding â€œMagnetic resonance imaging (MRI)â€”a diagnostic tool for postoperative evaluation of dental implants: a case reportâ€• Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology, 2018, 126, 444-445.	0.4	0
52	Parawasserstoffâ€basierte Hyperpolarisierung fÃ¼r die Biomedizin. Angewandte Chemie, 2018, 130, 11310-11333.	2.0	54
53	Metabolic and Molecular Imaging with Hyperpolarised Tracers. Molecular Imaging and Biology, 2018, 20, 902-918.	2.6	18
54	NMR Spectroscopy Techniques: Hyperpolarization for Sensitivity Enhancement. , 2018, , 168-168.		1

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55	MRI. , 2017, , 227-324.		2
56	Dental MRI using wireless intraoral coils. Scientific Reports, 2016, 6, 23301.	3.3	78
57	Molecular Imaging of Activated Platelets Allows the Detection of Pulmonary Embolism with Magnetic Resonance Imaging. Scientific Reports, 2016, 6, 25044.	3.3	18
58	Magnetic resonance imaging of intraoral hard and soft tissues using an intraoral coil and FLASH sequences. European Radiology, 2016, 26, 4616-4623.	4.5	44
59	Molecular MRI in the Earthâ€™s Magnetic Field Using Continuous Hyperpolarization of a Biomolecule in Water. Journal of Physical Chemistry B, 2016, 120, 5670-5677.	2.6	37
60	Quantitative description of the SABRE process: rigorous consideration of spin dynamics and chemical exchange. RSC Advances, 2016, 6, 24470-24477.	3.6	55
61	Evaluation of BP-ONJ in osteopenic and healthy sheep: comparing ZTE-MRI with ÂµCT. Dentomaxillofacial Radiology, 2016, 45, 20150250.	2.7	4
62	Modular Coils with Low Hydrogen Content Especially for MRI of Dry Solids. PLoS ONE, 2015, 10, e0139763.	2.5	9
63	Toward Biocompatible Nuclear Hyperpolarization Using Signal Amplification by Reversible Exchange: Quantitative in Situ Spectroscopy and High-Field Imaging. Analytical Chemistry, 2014, 86, 1767-1774.	6.5	105
64	Continuous Reâ€hyperpolarization of Nuclear Spins Using Parahydrogen: Theory and Experiment. ChemPhysChem, 2014, 15, 2451-2457.	2.1	41
65	Wholeâ€body MRIâ€based fat quantification: A comparison to air displacement plethysmography. Journal of Magnetic Resonance Imaging, 2014, 40, 1437-1444.	3.4	40
66	A continuousâ€flow, highâ€throughput, highâ€pressure parahydrogen converter for hyperpolarization in a clinical setting. NMR in Biomedicine, 2013, 26, 124-131.	2.8	83
67	A hyperpolarized equilibrium for magnetic resonance. Nature Communications, 2013, 4, 2946.	12.8	126
68	A battery-driven, low-field NMR unit for thermally and hyperpolarized samples. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2013, 26, 491-499.	2.0	33
69	On the spin order transfer from parahydrogen to another nucleus. Journal of Magnetic Resonance, 2012, 225, 25-35.	2.1	68
70	Dental MRI: Imaging of soft and solid components without ionizing radiation. Journal of Magnetic Resonance Imaging, 2012, 36, 841-846.	3.4	75
71	Fast volumetric spatial-spectral MR imaging of hyperpolarized 13C-labeled compounds using multiple echo 3D bSSFP. Magnetic Resonance Imaging, 2010, 28, 459-465.	1.8	27
72	Quality assurance of PASADENA hyperpolarization for 13C biomolecules. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2009, 22, 123-134.	2.0	79

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73	PASADENA hyperpolarization of 13C biomolecules: equipment design and installation. Magnetic Resonance Materials in Physics, Biology, and Medicine, 2009, 22, 111-121.	2.0	123
74	PASADENA Hyperpolarization of Succinic Acid for MRI and NMR Spectroscopy. Journal of the American Chemical Society, 2008, 130, 4212-4213.	13.7	170
75	Whole-BrainN-Acetylaspartate MR Spectroscopic Quantification: Performance Comparison of Metabolite versus Lipid Nulling. American Journal of Neuroradiology, 2008, 29, 1441-1445.	2.4	10
76	MR Spectroscopy in Diagnosis and Neurological Decision-Making. Seminars in Neurology, 2008, 28, 407-422.	1.4	27